



# SYSTEMS ACCOUNTABILITY & POLICY DEVELOPMENT

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"We provide the right information to the right people at the right time."

## ISSUE BRIEF

### Standard & Poor's "Return on Resources" Measure of School Performance

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S&P uses a measure they call a Performance Cost Index (PCI) as their measure of a school or district's "Return on Resources". The Performance Cost Index is defined as the average cost per measured "unit" of student performance. In its simplest form, the Performance Cost Index is calculated as per student expenditures divided by a performance measure such as the percentage of students meeting state standards.

S&P describes the PCI is "a proxy for exploring the relationship between spending and achievement". In reality, the PCI is an ambiguous and simplistic measure that is incapable of capturing the relevant differences that schools and districts face in educating students from different backgrounds and different circumstances. More specifically:

»The interpretation of the PCI is ambiguous. S&P acknowledges this: "As a cost index, lower PCIs are often viewed more favorably than higher PCIs, but this is not necessarily the case since different combinations of test results and spending levels can produce identical PCIs". S&P goes on to say, "For example, a low PCI derived from low test scores and low spending should not be misconstrued as a favorable return. Conversely, a high PCI derived by solid academic results and exceptionally high spending may reflect a

*community's investment in educational goals not fully reflected by a particular measure of student results.*" (S&P's SES website Glossary). In other words, a low PCI can be either good or bad, and a high PCI can be either good or bad. So what does the PCI tell us?

»S&P's adjustments to the PCI for student circumstances are arbitrary. In some forms of the PCI, S&P applies weights to the number of students in the calculation of per student expenditures. The weights are designed to account for the higher costs of educating students in special circumstances. S&P uses arbitrarily-set weights to adjust its per student expenditure calculation, which in turn affects the PCI calculation. What is really needed is a procedure that uses data on actual expenditures, student performance, and student characteristics to estimate the true value of the weights (we have such a procedure—it's called an education production function). In S&P's procedure, arbitrary inputs (the weights) lead to arbitrary outputs (the PCI).<sup>1</sup>

»S&P makes no adjustments at all for differences in school or district characteristics. A large body of research has shown that certain school and district characteristics, in particular school and district size, have a dramatic impact on costs per student. The omission of relevant school and district characteristics that influence the

achieving a given level of student achievement will bias the PCI estimates and make them misleading as guides to policy.

»S&P's adjustment of the PCI for the participation rate also is arbitrary. By dividing the PCI by the testing participation rate to arrive at the final PCI, S&P implicitly assumes that each percentage point change in the participation rate has an equal impact on the effectiveness with which a school or district uses its resources. For example, if two districts have the same spending per student and the same test scores, the district with a 75% participation rate has a PCI that is 33% higher (i. e., it has a 33% lower Return on Resources) than the district with 100% participation. As with student weights, what is really needed is the use of appropriate data to estimate the actual impact of differences in participation. S&P's arbitrary adjustment for participation causes an arbitrary impact on the PCI and makes comparisons of the PCI among districts meaningless.

S&P appears to have taken a common measure from the financial world—Return on Investment—and tried to fit it to the education world. The fit is not a good one. In the financial world, a dollar is a dollar is a dollar. In the education world, every student comes from unique circumstances and has unique needs, and every school and district has certain characteristics that are outside it's control but that have an impact on the costs of educating students. The hard work that needs to be done is to estimate the impact of those various student, school, and district characteristics on the costs of educating students. S&P turns the whole process on its head—it arbitrarily assumes the impacts of student characteristics, ignores the school and district characteristics altogether, then makes further arbitrary adjustments for the participation rate that confound the interpretation of their results. The state of the art in evaluating the effectiveness of schools passed S&P's approach 40 years ago with the publication of the Coleman report. The use of S&P's Performance Cost Index to Guide education finance policy would not be a step forward.

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